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Closing of Anaconda Company's zinc operations in Great Falls, Montana| Expected impact upon the economy of Great Falls, Montana

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THE CLOSING OF ANACONDA COMPANY'S ZINC OPERATIONS IN GREAT FALLS, MONTANA: EXPECTED IMPACT UPON THE ECONOMY OF GREAT FALLS, MONTANA

By

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CHAPTER I

INTRODUCTION

The General Problem Setting

During the latter part of 1971, The Anaconda Company announced plans to phase out its Montana zinc operations between April 1, 1972 and July 31, 1972. This decision will result in the closure of zinc plants in three Montana cities; Great Falls, Anaconda and East Helena. This paper is concerned with the closing of the Great Falls zinc plant and the anticipated impact this closure will have upon the economy of the Great Falls Area[1] during the remainder of calendar year 1972.

The phase out of the Great Falls operation will be based upon the zinc plant's eight electrolytic production units and will be accomplished in five steps. The first step was completed on April 1, 1972 when two electrolytic units were shut down. An additional unit has been scheduled for shut down on May 1, another on June 1, and still another

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[1]The Great Falls Area, for purposes of this paper, will be defined as the Great Falls Standard Metropolitan Statistical Area which has been identified by the Bureau of the Budget. This area covers Cascade County and includes Black Eagle and Malmstrom Air Force Base, both of which are adjacent to the city of Great Falls.

unit is scheduled to be shut down on July 1. It is anticipated that the three remaining units will be shut down at the end of July 1973.

The decision to phase out the Montana zinc operations was made as a part of Anaconda's corporate rebuilding process. The Anaconda Company's President, Mr. John B. M. Place, is directing a huge cost-cutting program and getting Anaconda out of the lead and zinc operations is a part of this program. Mr. Place said, "We had to figure what could be done to cut costs and to make the most of the company's remaining strengths."[2] His decision will end more than fifty years of zinc operations by the firm in Montana and will result in a reduction of approximately 750 workers in the Great Falls plant.

The layoffs began the first of April when six craftsmen were laid off due to the reduced work load in the zinc plant operation. The zinc plant had been shut down by one quarter of its capacity which would normally have resulted in seventy to eighty employees being laid off. William J. Roberts, Manager of the Great Falls Anaconda plant, explained, "Because of quits or presumed quits and the like, we don't know from day to day how many people will be curtailed."[3]

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[2]"From Riches to Rags," Forbes, January 15, 1972, p. 25.

[3]"Anaconda Can't Provide Names of Men Laid Off," Great Falls Tribune, April 2, 1972, p. 8.

Because of men quitting, only twenty-nine laborers had to be curtailed[4] and these workers were transferred to other departments in the wire mill and copper plant. It should be noted that the craftsmen and the laborers were reported separately with regard to being curtailed, although both would be included in the seventy to eighty employee figure which was mentioned previously.

Because the number of employees quitting is significant and results in a type of "non-enforced" layoff, this paper will deal with the reduction in Anaconda's local labor force between March 1, 1972 and December 1, 1972. By utilizing this figure it is possible to obtain a more realistic picture of the number of workers adversely affected by the zinc plant closure than could be obtained by using the company's figures concerning employees actually laid off. Some retirements will be accounted for through this process. It is alleged that under normal operations the retirees would be replaced by hiring new workers.

The scheduled layoffs, which began in April, were to be based upon seniority and not to be confined to the zinc plant. The men with the shortest service times in the copper operation and wire and cable mills, as well as in the zinc plant, are to be scheduled for curtailment in order to open up jobs for high seniority zinc plant employees. When the zinc

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[4]This is the term used by The Anaconda Company to describe the employment situation.

operations are closed, it is anticipated that the remaining workers at the Great Falls Anaconda Company plant will all be over thirty years of age with more than six years of plant seniority. Seventy-six per cent of the workers being laid off are age thirty or younger. This is significant in that those workers laid off are younger men who should be more likely to find new work than might older workers.

The average salary of those workers being laid off is $3.75 per hour for a forty hour week. With fringe benefits it is estimated that each one is making about the equivalent of $10,000 a year.[5]

The Research Objective

The objective of this study is to identify the probable economic changes that can be expected within the Great Falls Area as a result of The Anaconda Company closing its local zinc plant. The scheduled reduction of approximately 750 workers within a four month period (April 1 to August 1, 1972)[6] from the Anaconda Company payroll is especially significant in that this is the largest single industry located in the Great Falls Area. It is even more significant that this employment loss is occurring within a basic industry that

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[5]"A C to Employ 800 After Zinc Closure," Great Falls Tribune, March 5, 1972, p. 1.

[6]Some workers quit work sooner than April 1, 1972 in anticipation of being laid off from work. However, the scheduled layoffs were to begin in April.

exports its products out of the local area. While the apparent loss of purchasing power from the workers laid off from The Anaconda Company is an important consideration when considering probable economic changes, it is not the only matter which must be taken into account. The closing of the zinc operations will substantially reduce the company's requirements for railroad freight service, electrical power and industrial supplies. These reductions may ultimately affect the local operations of those companies supplying these products or services. It is beyond the scope of this paper to compute the dollar change in demand for a particular brand of goods or for a specific service that will result from the closing of the zinc plant. However, the expected relative changes in the demand for different categories of goods and services will be computed. The possible change in total employment in the service or nonbasic industries will be accounted for through the computation of a basic-service ratio and the calculation of a regional multiplier.[7] Thus, the study will evaluate the possible changes in total employment in the Great Falls Area. This will include total employment changes in the basic (zinc) industry.

This paper will also identify several other secondary effects which could logically be expected to result from the closing of the local zinc operations. The discussion concerning

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[7]Chapter III of this study includes an explanation of economic base theory, including a discussion on the basic-service ratio and the regional multiplier.

these effects will include such considerations as the possible migration of young workers from the local area. The exact economic impact from the secondary changes, other than those predicted by base theory, are difficult to evaluate at this time and are beyond the scope of this paper. They would, however, constitute important considerations for anyone who might later choose to do research to measure the degree of actual impact that the closing of The Anaconda Company's zinc plant in Great Falls did have upon the local economy.

The Research Limitations

This study will be confined mainly to a determination of the expected changes in demand for general categories of goods and services from businesses within the Great Falls Area. The time limitation will be from April 1972, when the first scheduled layoffs occurred, through December 1972. It is felt that projections beyond December 1972 would not be feasible as unforseen changes in economic conditions could extensively alter these projections. The expected impact upon retail trade establishments, service and recreation industries, financial institutions and the residential construction industry will be projected. The projections will account for economic changes due to employment losses in the basic (zinc) export industry. Also included with the above-mentioned projections will be a discussion of the economic changes that can be expected to occur with regards to corresponding employment losses in service (nonbasic or residential) industries.

The analysis concerning the basic and nonbasic industries employment will be performed by using economic base analysis methods.

Throughout this study the decision to close the Montana zinc operations will be taken at face value. This paper will not attempt to evaluate The Anaconda Company decision to terminate their lead and zinc operations. The circumstances and events leading to Anaconda's previously mentioned decision are lengthy and complicated and would provide the substance for a separate study.

CHAPTER II

A DESCRIPTION OF THE GREAT FALLS ECONOMY

The Montana Economic Base

It is helpful to review the greater economy of the State of Montana before attempting to evaluate the impact of any change upon the economy of the Great Falls Area. Montana's population has increased but at a rate much less than that of the national average. With regards to population, the national average growth from 1960 to 1970 was 13.6 per cent. The mountain states, on the whole, experienced a 19.6 per cent increase in population. Montana's growth rate during the same period was 2.9 per cent. This means that Montana's population, as a per cent of the national total, actually decreased from 1960 to 1970. Montana's slower growth in actual population has, in the past, been shown to result from net out-migration--an excess of persons moving out over persons moving in. Other possible causes, such as a lower birth rate or a higher death rate have not been shown to be a problem in Montana.

The net out-migration is due mainly to the state's relative lack of economic opportunity. Job opportunities appear to be especially limited for the young and the better educated persons. This results in the flight of educated and

talented young men and women to other states where employment opportunities are better. This is costly to the Montana taxpayers who support the public schools, including the colleges. It is also an intangible cost to possible Montana employers who could benefit from the vigor, vitality and knowledge of these young people. This also results in a lower average income per capita and per household as compared to the national average. During 1969 the average cash income per household in Montana was $7,720. This compared unfavorably with the national average cash income per household of $9,220. The following table depicts the cash income distribution for Montana and the United States during 1969.

TABLE 1

CASH INCOME DISTRIBUTION, MONTANA AND UNITED STATES, 1969[1]

	Montana		United States	
	Per Cent of Households In Income Class		Per Cent of Households In Income Class	
Income Class	Individual	Cumulative	Individual	Cumulative
$ 0,000 to 2,999	22.3	22.3	17.9	17.9
3,000 to 4,999	14.2	36.5	12.4	30.3
5,000 to 7,999	26.6	63.1	23.2	53.5
8,000 to 9,999	14.6	77.7	15.2	68.7
10,000 to 14,999	14.6	92.3	19.3	88.0
15,000 to 24,999	5.9	98.2	8.9	96.9
25,000 and over	1.8	100.0	3.1	100.0

[1]Montana State Office of Employment, Montana Employment and Work Force Monthly Report, no publisher listed, March, 1972.

It is significant that 63.1 per cent of all Montana households have an annual income of less than eight thousand dollars as compared to only 53.5 per cent of all United States households. Only 7.7 per cent of Montana households have an annual income of fifteen thousand dollars or more, while 12.0 per cent of the households nation-wide were in this higher income bracket.

A Montana Economic Study published by the University of Montana's Bureau of Business and Economic Research has revealed some interesting data for the period from 1950 through 1968. These data reveal the following information:

1. Employment in Montana increased only 14 per cent compared with increases of 33 per cent nationally and 41 per cent in the Rocky Mountain States.
2. Total personal income in Montana rose 48 per cent compared with increases of 111 per cent for the nation and 101 per cent in the Rocky Mountain States.
3. Per capita personal income in Montana fell from 108 per cent of the national average in 1950 to 86 per cent of the national average in 1968.
4. Unemployment rates for Montana were generally higher than those of the nation during this period. Growth in employment of 14 per cent did not keep pace with the population which increased 17 per cent.

The preceding data are indicative of a trend which has not been reversed. During 1970 unemployment in Montana, seasonally adjusted, averaged 6.7 per cent of the civilian work

force as compared to 4.9 per cent for the national average.[2] The 1971 data were 7.0 per cent for Montana compared with the national average of 6.0 per cent. Montana's higher unemployment rate has continued into the first three months of 1972. The closing of The Anaconda Company's Montana zinc operations is certain to aggravate the state's unemployment problems.

The costs of paying unemployment and welfare benefits increase with the unemployment problem. The state and federal unemployment insurance payments for Montana's unemployed totaled 10,300,000 dollars during 1971. Montana's total cost of relief benefits paid during fiscal year 1971 was 31 million dollars, which represented a fifty-five per cent increase over the 1968 relief payments of 20 million dollars. Unfortunately, Montana's high unemployment rate with its accompanying costs in many Montana cities exceed the national average. For example, compared to the United States average figured at 100, the cost-of-living index for Helena during the fourth quarter of 1971 was 110.4 for all items. This compared to 104.3 for Great Falls and 100.4 for Billings. The preceding three cities are the only ones in Montana for which data were available at the time this paper was being prepared.

In a state as small, by economic measures, as Montana, the establishment or loss of one really large industry could have a significant effect upon the entire state's economy.

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[2]Montana State Office of Employment, Montana Employment and Work Force Monthly Report, no publisher listed, March, 1972.

This industry could be one which provides as few as six thousand jobs. To illustrate this point the following table is presented.

TABLE 2

MONTANA CIVILIAN WORK FORCE
(Figures in Thousands)

Date	Civilian Work Force	Employment Total	Unemployment		
			Total	Per cent	
				Mont.	U.S.
1970					
January	261.3	241.0	20.2	7.7	4.2
February	260.4	238.8	21.6	8.3	4.7
March	266.0	243.2	22.8	8.6	4.6
April	271.2	252.6	18.6	6.9	4.3
May	282.8	264.3	18.5	6.5	4.1
June	306.4	284.3	22.1	7.2	5.6
July	309.8	291.2	18.5	6.0	5.3
August	306.3	290.5	15.6	5.1	5.0
September	287.3	272.5	14.6	5.1	5.2
October	283.9	269.6	14.1	5.0	5.1
November	282.5	263.4	19.0	6.7	5.5
December	276.4	256.4	19.9	7.2	5.6
1970 Average	282.9	264.0	18.8	6.6	4.9
1971					
January	269.9	245.8	23.7	8.8	6.6
February	272.7	247.8	24.5	9.0	6.6
March	277.1	254.0	23.1	8.4	6.3
April	286.8	266.5	20.3	7.1	5.7
May	291.0	273.9	11.1	5.9	5.3
June	313.9	291.3	22.5	7.2	6.5
July	313.9	288.3	19.8	6.3	6.2
August	315.0	290.3	18.9	6.0	5.9
September	293.6	270.9	16.9	5.8	5.8
October	283.2	267.8	15.3	5.4	5.4
November	287.0	268.7	18.2	6.3	5.7
December	285.5	264.5	20.9	7.3	5.5
1971 Average	290.8	269.2	20.1	7.0	6.0

Note: Not seasonally adjusted.

In the preceding table it is shown that Montana's 1970 and 1971 average unemployment percentage rates both exceed the national average. If a new industry had appeared in Montana and had employed exactly six thousand of the state's unemployed workers during 1970 and 1971, Table 3 will show how drastically the unemployment percentage figures would have been altered.

In the following table the 1970 and 1971 average unemployment percentages for Montana both appear as less than the national averages for the respective years. For the following example to have validity, several assumptions would have to have been made regarding the fictitious industry. For example, it had to have had a steady employment rate of exactly six thousand. It would have had to employ only unemployed people from Montana and have not attracted any new workers into the state. It would have had no local multipliers which would have further decreased the state's unemployment rate. These assumptions would not be realistic should a new industry move into Montana. However, the table does illustrate that an increase or decrease of just six thousand jobs in Montana could have a significant impact upon the state's economy. It is important to realize this fact before considering the impact that more than seven hundred lost jobs will have upon the economy of the Great Falls Area.

TABLE 3

MONTANA CIVILIAN WORK FORCE
(Figures in Thousands)

Date	Civilian Work Force	Employment Total	Unemployment		
			Total	Per cent	
				Mont.	U.S.
1970					
January	261.3	247.0	14.2	5.4	4.2
February	260.4	244.8	15.6	6.0	4.7
March	266.0	249.2	16.8	6.3	4.6
April	271.2	258.6	12.6	4.9	4.3
May	282.8	272.3	12.5	4.6	4.1
June	306.4	290.3	16.1	5.5	5.6
July	309.8	297.2	12.5	4.2	5.3
August	306.3	296.5	9.6	3.2	5.0
September	287.3	278.5	8.6	3.1	5.2
October	283.5	275.6	8.1	3.0	5.1
November	282.5	269.4	13.0	4.8	5.5
December	276.4	262.4	13.9	5.3	5.6
1970 Average	282.9	270.0	12.8	4.5	4.9
1971					
January	269.9	251.8	17.7	7.0	6.6
February	272.7	253.8	18.5	7.3	6.6
March	277.1	260.0	17.1	6.6	6.3
April	286.8	272.5	16.0	5.9	5.7
May	291.0	279.9	11.1	4.0	5.3
June	313.9	297.3	16.5	5.5	6.5
July	313.9	294.3	13.8	4.4	6.2
August	315.0	296.3	12.9	4.4	5.9
September	293.6	276.9	10.9	3.9	5.8
October	283.2	273.8	9.3	3.4	5.4
November	287.0	274.7	12.2	4.4	5.7
December	285.5	270.5	14.9	5.5	6.0
1971 Average	290.8	275.2	14.1	5.1	6.0

Note: Not seasonally adjusted.

If the growth of population and the rate of employment can be taken as valid indicators of economic health, then Montana has displayed certain severe maladies. The data presented above in this chapter tell a cheerless story of a state

whose recent economy has lagged well behind the national averages. No one cause can be specifically blamed for all of Montana's problems. It does appear, however, that the lack of economic opportunity has been a major contributor to Montana's woes.

The Economic Base for the Great Falls Area

The Great Falls Area is located in North Central Montana and has a population of 82,000. The major city within this area is Great Falls, which is located at the junction of the Sun and Missouri Rivers. The city of Great Falls with its population of 60,000 inhabitants is the second largest city in Montana. The Great Falls Area, which takes in all of Cascade County, serves as a primary trade area for twelve counties which have a combined population of about 170,000 people. Thus, the Great Falls Area, classified as a Regional Trade Center, serves the needs of one-fourth of Montana's 694,000 residents.

Transportation into the Great Falls metropolitan area is readily available through a variety of services. Rail freight service is provided by Burlington Northern. Five airlines provide over-night air freight service to most points west of the Mississippi River. Plans are presently being implemented to expand the present airport facilities. The airport has been designated as an international one and provides customs facilities as well as having the benefit of being able to serve for direct importation or exportation of

goods. Four regional and local bus carriers provide parcel and passenger service. Approximately thirty interstate truck carriers are represented in Great Falls. Second day delivery by motor freight extends from Seattle, Salt Lake, Denver and similar distances. Interstate Highway 15 and U. S. Highways 87 and 89 intersect at Great Falls. Connections are available to U. S. Highways 2, 10 and 12 as well as to Interstate Highway 90. The Great Falls Area is close to three major recreational centers, Glacier and Yellowstone National Parks and the King's Hill Ski Area.

Nicknamed the "Electric City," Great Falls is close to several dams constructed along the Missouri River which provide an ample supply of low cost hydroelectric power. A vast supply of agricultural products and natural resources, such as minerals, natural gas, petroleum and low sulphur content coal, are available in quantity within the immediate area.

The buying power of city residents ranked eighty-first in the nation in dollar volume per household during 1971. The money these households spent totaled more than $173 million which put Great Falls in the 253rd place in the nation in retail sales. A 1971 survey of local homeowners showed that the average yearly income of a Great Falls household was $9,373.[1] The survey results also indicated that 44 per cent of the households sampled had an income exceeding $10,000

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[1]"Falls Markets Serve Wide Area," Great Falls Tribune, February 20, 1972, Section A, p. 1.

while 7 per cent had incomes of less than $3,000. Malmstrom Air Force Base, located two miles east of the Great Falls city limits, employs 6,625 persons. The base workers contributed $79 million to the economy of Central Montana during 1971, with the vast bulk of it being spent in the Great Falls Area.

The population of the Great Falls Area increased from 73,418 in 1960 to 81,804 in 1970. This represented a population increase of 11.4 per cent for this period and was almost four times Montana's growth rate of 2.9 per cent. This 11.4 per cent growth rate, however, represents a decline from the 38.3 per cent growth rate the Great Falls Area experienced from 1950 to 1960. When considering the population data for the Great Falls Area it is particularly significant to note the trend from rural to urban living. The trend from 1950 to 1970 is shown in the following table.

TABLE 4[2]

GREAT FALLS AREA POPULATION
1950, 1960, 1970

Year	Total Population	Urban Population	Rural Population	Per Cent Urban	Per Cent Rural
1950	53,027	39,214	13,813	74.0	26.0
1960	73,418	57,629	15,789	78.5	21.5
1970	81,804	70,905	10,899	86.7	13.3

The trend towards urbanization reflected in the above

[2]Montana Department of Planning and Economic Development, Montana Data Book, 1970.

table is important because the patterns of employment, of income and of spending tend to differ between rural and urban areas. Urban per capita income tends to be higher and a higher percentage of urban income is spent on nonessential items. The per capita personal income for the Great Falls Area was $1,817 in 1950, $2,290 in 1959, and by 1968 it had reached $3,264. Comparable data for Montana's per capita personal income are $1,622, $2,010 and $2,942 for the years 1950, 1959 and 1968, respectively. It should be noted that while both Montana's and the Great Falls' per capita personal incomes are rising in absolute dollar amounts, both are declining relative to the national average. Montana's per capita personal income fell from 108 per cent of the United States average in 1950, to 86 per cent in 1968. This gave Montana a second-to-last ranking among the 48 conterminous states in growth of per capita income from 1950 to 1968.

To better understand the economic base of the Great Falls Area, it would help to review the distribution of its civilian work force. The following table depicts these civilian employment data for February 1971 and February 1972.

From this table it can be seen that the bulk of civilian employment in the Great Falls Area is in the Wholesale and Retail Trade, Services and Mining, and Government Employment categories. Of the 25,300 Montana employees in the Agriculture category in February 1972, only 800 of these were located in the Great Falls Area, or a mere 3.2 per cent. However, the Great Falls Area employed 11.5 per cent of Montana's

Manufacturing category employees and 12.9 per cent of the Nonmanufacturing category employees.

TABLE 5[3]

GREAT FALLS AREA EMPLOYMENT BY INDUSTRY
(Figures in Thousands)

Industry Category	Feb. 1972	Feb. 1971	Net Changes Feb. 1971 to Feb. 1972
Civilian Work Force	31.7	30.8	.9
Unemployment	2.3	2.1	.2
Per cent of Work Force	7.3	6.7	.6
Employment, Total	29.4	28.7	.7
Nonagricultural Wage and Salary	25.3	24.6	.7
Manufacturing	2.8	2.9	.1
Nonmanufacturing	22.5	21.7	.8
Contract Construction	1.1	1.1	0
Transportation and Public Util.	2.0	2.1	.1
Wholesale and Retail Trade	6.9	6.6	.3
Finance, Insurance and Real Est.	1.6	1.5	.1
Services and Mining	5.0	4.9	.1
Government	5.9	5.5	.4
All Other Nonagricultural Employ.	3.3	3.3	0
Agriculture	.8	.8	0
Persons Involved in Labor/Mgmt. Disputes	0	0	0

The Great Falls Area has in recent years experienced lower unemployment rates than has Montana. This fact helps to explain the more rapid growth of population in the Great Falls Area--in simple terms, the better job opportunities attracted a greater share of people. The following table provides the unemployment percentages for the Great Falls

[3]Montana State Office of Employment, Montana Employment and Work Force Monthly Report, no publisher listed, March, 1972.

Area during 1971 and 1972. It also furnishes the Montana and United States unemployment percentage data for comparison purposes.

TABLE 6[4]

CIVILIAN WORK FORCE
(Figures in Thousands)

Date	Employment Total	Unemployment Total	Unemployment Great Falls Area	Unemployment Per cent State	Unemployment Per cent U.S.
1970					
January	27.0	1.6	5.8	7.7	4.2
February	27.1	1.7	5.8	8.3	4.7
March	27.7	1.8	6.0	8.6	4.8
April	27.9	1.7	5.7	6.9	4.3
May	28.5	1.8	5.9	6.5	4.1
June	30.0	1.9	5.8	7.2	5.6
July	30.2	1.7	5.2	6.0	5.3
August	30.3	1.4	4.5	5.1	5.0
September	29.9	1.3	4.2	5.1	5.2
October	29.8	1.3	4.0	5.0	5.1
November	29.7	1.5	4.8	6.7	5.5
December	29.3	1.5	4.9	7.2	5.6
1970 Average	29.0	1.6	5.2	6.6	4.9
1971					
January	28.3	2.0	6.7	8.8	6.6
February	28.7	2.1	6.7	9.0	6.6
March	29.0	2.0	6.4	8.4	6.3
April	30.0	1.8	5.7	7.1	5.7
May	30.4	1.7	5.4	5.9	5.3
June	31.4	2.2	6.5	7.2	6.5
July	30.0	2.1	6.3	6.3	6.2
August	30.2	2.0	5.8	6.0	5.9
September	29.7	1.8	5.6	5.8	5.8
October	30.6	1.5	4.5	5.4	5.4
November	30.9	1.6	5.0	6.3	5.7
December	30.4	1.9	5.9	7.3	5.5
1971 Average	30.0	1.9	5.9	7.0	6.0

Note: Not seasonally adjusted

[4]Montana State Office of Employment, Montana Employment and Work Force Monthly Report, no publisher listed, March, 1972.

It can be seen from the preceeding table that the unemployment percentages for the Great Falls Area remained consistently below the comparative data for the state of Montana. The average Great Falls Area unemployment percentage data for 1970 and 1971 are remarkably close to the United States average data for the same years.

In the next chapter a detailed analysis of the probable economic effects of the zinc plant closing will be performed. Before proceeding to this analysis, it would be helpful to calculate the Great Falls Area 1970 and 1971 average unemployment percentage data with an additional 700 persons added to the unemployment total. This would theoretically have been the case had The Anaconda Company completely closed its Great Falls zinc operations on December 31, 1969, and all of the reduced work force had stayed in the area and did not find other employment. For purposes of illustration this represents about the most unfavorable outcome that could result from such a plant closing. A 1970 average unemployment percentage of 7.3 for the Great Falls Area would result from reducing the average employment figure by 700 and adding the corresponding amount to the 1970 average unemployment figure. When the 1971 calculation is made in a similar manner, an average unemployment percentage of 8.1 is obtained for 1971. Both the 1970 figure of 7.3 per cent and the 1971 figure of 8.1 per cent far exceed the average unemployment in the United States for these two years. It is obvious that The Anaconda Company's proposed employment reduction of

approximately 750 workers, even without any multiplier calculation, is a significant reduction for the Great Falls Area. With the state economic background and the local economic base in proper perspective, the following chapter will identify expected changes in the economy of the Great Falls Area which can be reasonably associated with the closing of the zinc operations by The Anaconda Company.

CHAPTER III

THE EXPECTED IMPACT OF THE ZINC PLANT CLOSING

Economic Base Theory

There is a branch of economic study which concerns itself with adapting economic theory to regional growth and development. This branch is known as regional economics and it is the study from the viewpoint of economics of the differentiation and interrelationship of regions in a universe of unevenly and imperfectly mobile resources. The regional economists have developed many theories to explain the stages of economic development and why some regions experience a more rapid and more extensive process of economic growth than do other regions. Most of these theories have one common point of agreement--that the regions which experience the most economic growth are those in which industrialization is achieved and from which great quantities of products are exported. From this has been developed the general premise that "the reason for the existence and growth of a region--whether it is a community or a small resource area at one extreme or a huge metropolitan or resource region at the other extreme--lies in the goods and services it produces locally but sells beyond its borders."[1] If this premise is accepted

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[1]Walter Isard, Methods of Regional Analysis: an Introduction to Regional Science, (Cambridge, Massachusetts, 1960) p. 190.

as a basis for explaining economic development, then it can be deduced that some type of an analytical method would be useful for identifying those industries that export their products out of the local region.

The type of analysis that distinguishes between basic (primary) industry and service (nonbasic or residential) industry is called economic base analysis. The basic activities provide the means of payment for raw materials, food and manufactured products which the region cannot produce itself. These basic activities also support the service type activities which are principally local in productive scope and market areas. To quantitatively measure the basic and service components of an individual area or region, a "basic-service ratio" can be computed. This term is used to describe the ratio of the total employment in the area's basic or export activities to total employment in its service or local activities. This ratio can also be used to describe the proportion between the increase in employment in an area's basic or export activities and the increase in its service or local activities. From the data required to compute this basic-service ratio, a regional multiplier can be calculated. This multiplier is equal to total (or increase in) employment in both the basic and service activities divided by total (or increase in) basic employment.

The following table, based upon February 1972 employment figures, breaks out employment in each work category according to employees serving basic and nonbasic markets.

TABLE 7

GREAT FALLS AREA EMPLOYMENT BY INDUSTRY[2] WITH EMPLOYMENT DIVIDED INTO BASIC AND NONBASIC CATEGORIES, FEBRUARY 1972

Industry	Total Employees	Percentage of[3] Employees Serving Export Markets	Employees Serving Export Markets	Employees Serving Local Markets
Manufacturing	2,800	90.0	2,520	280
Contract Construction	1,100	15.0	165	935
Transportation & Public Utilities	2,000	20.0	100	1,900
Wholesale & Retail Trade	6,900	20.0	1,380	5,520
Finance, Insurance & Real Estate	1,600	10.0	160	1,440
Service & Mining	5,000	10.0	500	4,500
Government	5,900	15.0	885	5,015
All Other Nonagricultural Employment	3,300	0.0	0	3,300
Agriculture	800	85.0	680	120
Total	29,400		6,390	23,010

[2]Montana., State Office of Employment, Montana Employment and Work Force Monthly Report, Helena, March, 1972.

[3]Percentage figures represent the best estimates of the writer.

From the preceeding table the basic-service ratio of total employment by industry group can be calculated. The totals of 6,390 employees in the export market (basic) category, as compared to 23,010 employees in the local market (service) category gives us a ratio of 6,390:23,010 employees which works out to a basic-service ratio of 1:3.6 with regards to total employment. This simply means that for every local employee in the basic (or export) work category, there are 3.6 employees working in the nonbasic (or service) category.

With this information a regional employment multiplier, based upon total employment, can easily be obtained. This regional employment multiplier is simply a ratio of the total employment (basic and nonbasic) to basic employment, which is most simply expressed as unity plus the basic-service ratio. For the Great Falls Area the regional employment multiplier would thus work out to 4.6 (1+3.6). With the simple regional multiplier it might appear to be easy to project losses in total employment in the area, based upon losses of employment in the basic industries. That is, it would appear that for every employee laid off from a job in the export employment category, a total of 4.6 employees should lose their jobs in the region or area. This total of 4.6 employees should correspond to the basic-service ratio of one basic category employee to 3.6 service category employees.

While it might on the surface appear that changes in an area's total employment could be easily calculated from

expected changes in the area's basic employment, this is not the case. The employment multiplier is usually used to forecast increases in employment and therefore, it does not hold true that the ratio must work exactly the same when used in a reverse procedure. The psychology of business expansion differs greatly from that of reducing the operations of a going concern. For example, the going concern will often reduce employment hours for several employees rather than lay off one of these employees. Even if the regional employment multiplier did work exactly the same in reverse, it does not give any time range for these total employment changes to take place. Certainly the changes in nonbasic employment would normally lag behind the changes in basic employment. From an economic viewpoint it would be helpful to know the amount of time lag. Another limitation to using employment multipliers is that data concerning the number of jobs do not catch the significance of different wage levels in different industries which could lead to different secondary (multiplier) effects from an economic viewpoint. There are other possible limitations to the use of regional employment multipliers.

For all of these limitations, this multiplier is a useful tool for projection purposes. While the exact changes in employment multiplier does give a relative estimation of the ratio and direction of changes in basic and nonbasic employment. For these previously mentioned reasons, and to provide an improved understanding of the economic composition of the Great Falls Area, the basic service ratio and the

regional employment multiplier will be explained and will be used to project the secondary employment effects that could result from The Anaconda Company closing its local zinc operations.

The Primary Effects

The Anaconda Company's manufacturing division, located north of the city of Great Falls, constitutes the largest single industry in the Great Falls Area. The industrial complex occupies a 500 acre site and it provides the area with one of its better known landmarks, a 506 foot smoke stack. The operations of this division are broken down into copper, aluminum and zinc processing. On January 1, 1972 The Anaconda Company employed 1,647 people in its local operations. By March 1, 1972 the employment figure was at 1,632. It is estimated that there will be approximately 885 employees by the end of December 1972.[4] Because this study covers the period of April through December 1972, the March 1, 1972 employment figure of 1,632 was used as a base from which the total employment loss due to the closing of the zinc operatios was computed. The March 1, 1972 employment data should be more accurate than using the April 1, 1972 employment data

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[4]These employment figures were obtained from an official in The Anaconda Company during a personal interview on April 11, 1972. They represented the best information available to that official at the time of the interview.

because employees began to quit work in March, anticipating their later employment termination. During March 1972 there were seventy-five employees who terminated their employment with the local branch of The Anaconda Company. These data compare with thirty-nine terminations in March 1971 and fifty-two terminations in March of 1970.

Due to the high number of employment terminations in March 1972, The Anaconda Company did not have to lay off any laborers when the first two electrolytic production units closed on April 1, 1972. This was also due to a concerted effort on the part of Anaconda officials to reduce local hiring in March, so as to have job openings available to employees in the zinc production units that were closing in April. Because of the large number of voluntary terminations in March, The Anaconda Company was actually short of the required number of laborers needed in April and submitted a request for more employees to the local office of the Montana State Employment Service. Six craftsmen were laid off by Anaconda on April 1, 1972 because no openings existed for their specialities. These craftsmen were offered other labor but they chose not to work outside of their specialities. No layoffs were expected to be required in May 1972.

Of the 747 employee reduction (1,632 employees on March 1, 1972 less an anticipated 885 employees on December 31, 1972) expected during March through December 1972, The Anaconda Company felt that at least twenty-five of these employees

would obtain work with the company at some other operating locations; most of these twenty-five will go to Butte. Approximately seventy-one of the employment reductions will affect salaried workers. Fifty of the seventy-one salaried employees leaving the company will be eligible for a severance pay of one week's full pay for each year of employment with the company. Of the 676 non-salaried workers being reduced during 1972, approximately 311 will be eligible for supplementary unemployment benefits provided by the union-management agreement. To be eligible an employee must have over two years of employment with the company, be eligible for state unemployment benefits, and must not have quit his job. An undisclosed number of the 747 employees reduced will retire, and the company will simply not hire new employees when the retirement takes place.

It is estimated that the average hourly wage of a non-salaried employee being terminated is $3.75 based on a forty hour week. This would be about $150 a week or $7,800 a year, excluding any overtime pay. With fringe benefits included, the annual pay would be about $10,000 a year. The average salaried worker being terminated would earn about $180 a week or $9,360 annually. This higher figure reflects a slightly longer period of employment with the company and the fact that the salaried workers are under different fringe benefit plans. The measurement of primary impact upon the Great Falls Area as a result of the loss of 747 jobs in a basic industry

must begin with an analysis of the anticipated loss of consumer purchasing power, or disposable personal income.

Given that each hourly wage rate worker has an average weekly gross income of $150; after Federal and state income taxes and deductions for Social Security are taken out, the disposable personal income is approximately 75 per cent of the gross pay figure or $112.50. For a salaried worker the disposable personal income[5] would amount to about $135 per week.[6] To determine the loss in purchasing power from April through December 1972 it is also necessary to project the employment reduction for each month from the base figure on March 1, 1972 of 1,632 employees. The reduced percentage of employment of hourly wage rate workers should generally correspond to the scheduled percentage phase out of the zinc operations by electrolytic production units. This percentage guide was also used to calculate the reduction of salaried workers, although it is probable that their rate of reduction may not correspond to equipment shutdown as well as does the number of hourly wage rate workers.

The phase out of workers, based upon the proposed schedule for closing the zinc operations, is illustrated in

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[5]Personal income minus personal taxes equals disposable personal income which consists of personal consumption expenditures and personal saving.

[6]These pay figures, both hourly wage rate and salaried, are based on a normal work week of five days. Overtime would add to the wages of an hourly wage rate worker. However, overtime is not common when unemployment is high, as it is at present.

Table 8. The number of workers by each category along with the corresponding figures representing the weekly reduction in disposable personal income is reflected.

TABLE 8

ZINC PLANT PHASE OUT PLAN[7]

1972 Shutdown Date	Percentage of Units Closed	Hourly Wage Rate Workers		Salary Workers	
		Number Reduced	Weekly Loss of Disposable Income	Number Reduced	Weekly Loss of Disposable Income
April 1	25.0	170	$19,125	17	$2,295
May 1	12.5	85	9,563	9	1,215
June 1	12.5	85	9,563	9	1,215
July 1	12.5	85	9,563	9	1,215
August 1	37.5	251	28,238	27	3,645
Total	100.0	676	$76,052	71	$9,585

It is shown in Table 8 that when the total zinc plant operation has been closed there will be a reduction of 676 hourly wage rate workers whose weekly disposable income would have been $76,052. The seventy-one salaried workers who will be reduced will represent a loss of $9,585 weekly disposable income. After the zinc plant closes, reduction in disposable pay of $85,637 is the projected weekly loss to the 747 persons who will no longer be in the employment of The Anaconda Company. This weekly figure of $85,637 will become effective

[7]"5-Step A C Zinc Phaseout to Begin April 1," Great Falls Tribune, February 29, 1972, p. 1.

on August 1, 1972 after the total zinc plant operation is closed. Until August, the reduction in workers and weekly disposable income will be a lesser amount than the $85,637. The expected reduction in disposable income for the months of April through December 1972 is shown in the following table.

TABLE 9

DISPOSABLE PERSONAL INCOME LOSS,
APRIL - DECEMBER 1972

Month	Number of Work Weeks	Total Weekly Disposable Income Loss	Total Monthly Disposable Income Loss
April	4.0	$ 21,420	$ 85,680
May	4.6	32,198	148,111
June	4.4	42,976	189,094
July	4.2	53,754	225,767
August	4.6	85,637	393,930
September	4.2	85,637	359,675
October	4.4	85,637	376,803
November	4.4	85,637	376,803
December	4.2	85,637	359,675
Total	39.0		$2,515,538

The total loss of disposable income of $2.5 million for the months of April through December of 1972 represents a large loss in consumer purchasing power. The share of the total disposable income that would represent a reduction in personal consumption expenditures can be calculated. For the state of Montana, 1968 disposable income totaled $1.76 billion.[8]

[8]Montana Department of Planning and Economic Development, Montana Data Book, 1970.

Of this disposable income, $1.65 billion represented personal consumption expenditures while $114.4 million represented personal savings. Thus, personal consumption expenditures represented 93.5 per cent of disposable income while personal savings represented 6.5 per cent of disposable income. These data were selected as being fairly representative of the consumption and the savings functions. Applying these representative percentages, the $2.5 million of disposable income can be allocated to $2.4 million for personal consumption expenditures and about $164 thousand for personal savings.

The personal savings figure of $164 thousand represents a fair estimate of the amount of money which would otherwise have gone into personal savings. This study assumes that persons receiving unemployment benefits will not be able to save any part of their unemployment checks. However, the $2.4 million does not fairly represent the amount of reduction that local businesses will experience due to the reduction of the 747 individuals from The Anaconda Company's payrolls. The problem is that offsetting unemployment and severance payments will be made available to many of the unemployed individuals. The basic weekly unemployment payment for eligible individuals is fifty-two dollars which is paid for up to one year, through the Montana State Employment Service. It is estimated that 311 of the hourly wage rate workers laid off would also be eligible for supplemental

unemployment benefits provided through The Anaconda Company's agreement with the United Steel Workers. The company-union supplemental payment would provide the eligible unemployed individuals with an extra twenty-five dollars per week for the first twenty-six weeks. If the eligible unemployed individuals did not find a new job in the first twenty-six weeks, then they would receive an extra fifty dollars per week for the second twenty-six weeks.

The salary workers will not be eligible for company-union supplemental unemployment benefits. It is estimated that fifty of the seventy-one salaried employees leaving The Anaconda Company's employment will be eligible for a severance pay of one week's full pay for each full year of employment with the company. It will be estimated that the average salaried worker leaving, who is eligible for this benefit, has three and one half years of employment. The severance pay expressed in disposable income would equal $23,625 (50 times 3.5 times $135). This severance pay would be made even if the salaried worker immediately found other employment, as opposed to the supplemental unemployment benefits which are paid to eligible hourly wage rate workers only while they remain unemployed.

It is difficult, at best, to estimate an exact percentage of the 747 individuals no longer on The Anaconda Company pay rolls who will find work during 1972. Because Montana and the Great Falls Area have high unemployment rates, it can be

assumed that each of the 747 individuals who do find new employment locally, will in fact be taking a job that would otherwise have been taken by someone else in the area. This "someone else" remains unemployed as opposed to the ex-employee of The Anaconda Company, but the net result is still a loss of personal disposable income in the Great Falls Area. Thus, personal consumption expenditures will remain less for the remaining unemployed individuals and this will still affect local merchants. The best outside estimate presently available is that the reduction of 747 jobs in the basic (zinc) industry is going to result in nearly 700 former workers at The Anaconda Company seeking work by August 1972.[9] In the state's local employment area (Area IV), which includes the Great Falls Area, there are presently 3,500 unemployed persons registered, with the number increasing by about 100 per day.

It appears that the reduction of 747 employees by The Anaconda Company due to the closing of its local zinc plant, will be felt by local merchants through a reduction in their volume of sales. The maximum primary effect for April through December 1972, measured in dollars, would appear to be a loss of $2.35 million in personal consumption expenditures. This loss, however, will be offset by some unemployment compensations and by some severance payments. The severance payments

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[9]"Northcentral Area Unemployment Rising," Great Falls Tribune, April 12, 1972, p. 1.

were previously computed as a one time lump sum figure of $23,625. This amount can be deducted from the maximum personal consumption expenditure loss of $2,352,028 which would reduce the maximum loss of personal consumption expenditure to $2,328,403.

I feel that the figure of 700 former Anaconda employees seeking employment by August 1972 is indicative of the employment situation at this time. There is no sound means by which to predict how many of the 747 will have employment by that time, or even by the end of December 1972.

The local branch of The Anaconda Company is attempting to place as many employees as possible with the company in other locations such as Butte. The Anaconda Company officials are also allowing local employers to obtain the names of Anaconda employees who will be laid off and who might have job qualifications that the local employer seeks.

For all of the efforts being made, unless new industry or work projects are introduced into the Great Falls Area, there is going to be a significant unemployment problem for some time to come. Bearing this in mind, the $2.33 million maximum personal consumption expenditure loss should be further reduced, for purposes of this study, by only the known amount of potential unemployment benefits available through December 31, 1972. This reduction will be fifty-two dollars per week for all but 311 individuals who are eligible to receive, with supplemental benefits, seventy-seven dollars

per week for the first twenty-six weeks of unemployment and one hundred and two dollars per week for the second twenty-six weeks. The following table establishes the amount of unemployment benefits available to the 747 individuals for the period of April through December 1972. The 311 individuals eligible for supplemental benefits will be assumed as having their employment terminated in increments proportional to the remainder of the workers. The dollar figures were obtained for each month by computing the dollar amount of unemployment benefits on a weekly basis, then multiplying the weekly totals by the number of work weeks in each month.

TABLE 10

POTENTIAL UNEMPLOYMENT PAYMENTS TO WORKERS WHO WERE EMPLOYED WITH THE ANACONDA COMPANY APRIL - DECEMBER 1972

Month	Number of Work Weeks	Amount of Basic Unemployment Payments	Amount of Supplemental Unemployment Payments
April	4.0	$ 38,496	$ 7,800
May	4.6	67,215	13,455
June	4.4	85,800	17,160
July	4.2	102,430	20,475
August	4.6	178,682	35,765
September	4.2	163,145	32,655
October	4.4	170,914	42,790
November	4.4	170,914	47,080
December	4.2	163,145	49,035
Total	39.0	$1,140,741	$266,215

The total unemployment benefits for April through December could amount to $1.14 million plus $266,215 or a total

of $1.4 million. When this amount is deducted from the $2.33 million which was previously figured as the maximum adjusted loss of personal consumption expenditure, the result is a figure of $921,447. This latter figure can be fairly used as an estimate of net loss, for April through December 1972, in personal consumption expenditures which will result from the reduction in The Anaconda Company work force. Because the Great Falls Area is by far the largest shopping area within hundreds of miles, all of the net personal consumption expenditure loss of $921,447 was assigned as a loss to retail trade and services businesses in the Great Falls Area.

The net loss in personal consumption expenditure can now be assigned against expected changes in demand for general categories of goods and services. Based upon 1968 Montana figures, personal consumption expenditures can be allocated as follows: 14 per cent for durable goods, 44 per cent for nondurable goods and 42 per cent for services.[10] It is not expected that the closing of The Anaconda Company zinc operations will have any significant impact upon 1972 residential construction. For example, in March 1972, residential permits were issued for the construction of thirty-four housing units.[11] This compared with residential construction permits issued for only sixteen housing units in March 1971. Should the high

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[10]Montana Department of Planning and Economic Development, Montana Data Book, 1970.

[11]"March Set Substantial Mark in Residential Permits," Great Falls Tribune, April 4, 1972, p. 18.

unemployment rate continue into 1973, then it will probably have a long range effect upon the residential construction industry in the Great Falls Area. The following table summarizes the expected economic impact with regards to demand for local goods and services.

TABLE 11

EXPECTED ECONOMIC IMPACT
CHANGES IN DEMAND FOR LOCAL GOODS AND SERVICES
APRIL - DECEMBER 1972

Category	Expected Loss of Revenue in Dollars	Expected Loss of Savings in Dollars[12]
Retail Trade Establishments		
Durable Goods	129,003	
Nondurable Goods	405,437	
Service Industry (Including Recreation)	387,007	
Residential Construction Industry	0	
Financial Institutions . . .		163,510
Totals	921,447	163,510

While the above figures can certainly not be offered as being absolute or conclusive, they do offer a degree of concerted measurement of the expected primary effects of the closing of The Anaconda Company's zinc operations upon the

[12]The statistical figure listed in this column is the amount of personal savings that is expected not to take place due to the reduction in The Anaconda Company payroll. This does not account for probable dissavings which may occur.

Great Falls Area economy.

The Secondary Effects

Earlier in this chapter a basic-service ratio and a regional employment multiplier were presented for the Great Falls Area. The usage and limitations of these economic tools were discussed and it was concluded that they were useful for projection purposes. The basic-service ratio was 1:3.6 and the regional employment multiplier was 4.6. Employing the basic-service ratio against the 747 employee reduction at The Anaconda Company, it would appear that there is a potential for the local service sector to experience a corresponding unemployment of 2,689 persons. This would make a total basic-service unemployed figure of 3,436 (747 + 2,689) in the Great Falls Area due to the impending reduction in basic industry employment. This agrees with the results achieved when the regional employment multiplier of 4.6 is applied to the reduction of 747 workers (747 times 4.6 equals 3,436). It is recalled that the employment multiplier is generally used to forecast employment increases in the service sector due to employment increases in the basic industries. There is no reason to assume that the ratios work exactly the same in either direction. However, the trend of employment in the service sector to follow employment in the basic industry sector is significant. It is felt that studies of these trends would show a greater time lag between employment

reductions in the service sector and employment reductions in the basic sector when total employment is decreasing rather than increasing. The greater lag time would not necessarily indicate a failure of the service sector to realize that employment reductions might be necessary. The greater lag time would more probably reflect the general business reluctance to react too hastily to adverse economic changes. It would be psychologically harder to accept a decrease in the operations of a going concern than it would be to accept the necessity of business expansion in the face of increased economic opportunities. It should also be remembered that the basic-service ratio does not reflect the probability that wage rates may vary greatly between basic and service employees. This wage difference would probably favor basic employees and hence the loss of personal disposable income would be less for each job loss in the service sector.

The zinc plant closing, combined with the multiplier effect, could result in the unemployment of many young persons in the Great Falls Area. Another secondary effect of these reductions in employment opportunities could be the migration of young workers, and their families, from the Great Falls Area and perhaps even out of Montana. This could lead to a population reduction which in turn could create other secondary problems such as the further reduction of consumer buying power in the area. This could cause local businesses

to close and would deter further business expansion and investments in the local area. If employment opportunities remain few, and workers do not migrate, then competition for existing jobs could drive local wages downward. This would create a decrease in the area's per capita income and decrease the level of the standard of living for local residents.

There are many other secondary effects from the closing of the local zinc plant which are not accounted for in the regional employment multiplier nor in the basic-service ratio. For example, the railroad will lose a significant portion of its freight business when the local operations of The Anaconda Company are reduced. This could mean fewer railroad freight cars coming into this area and hence possible hikes in railroad freight rates due to a reduction of traffic volume. The Montana Power Company will experience a reduction in its business with The Anaconda Company. This reduced business could amount to an annual reduction of approximately three million dollars worth of business to the Montana Power Company. While most of The Anaconda Company's supplies are purchased by contract bidding, the reduction of activity at the plant will mean that less supplies will be needed. This means that suppliers in the Great Falls Area will have fewer opportunities to sell their products to the local Anaconda plant.

There are social costs that must be paid where there exists economic progress. The closing of the zinc plant

represents economic decline to the area and in return certain social "benefits" may occur. There may be, for instance, cleaner air in the area when the giant smoke stack at The Anaconda Company is no longer being used. If workers do actually migrate out of the local area then the highways will be less crowded and the competition for residential and recreational facilities should be lessened. Whether these "benefits" are worth the price of economic decline is not a consideration of this study. They are mentioned here because they do constitute secondary considerations resulting from the closure of the local zinc operations.

CHAPTER IV

SUMMARY

Conclusion

The general economic trends which are revealed in this study reflect the present unfavorable economic conditions which prevail in Montana and in the Great Falls Area. Had The Anaconda Company's zinc plant closing occurred at a time when general economic conditions were improved, the forecasted economic impact of the zinc plant would not be as severe as it presently appears. With the present unemployment rate in the Great Falls Area exceeding 6 per cent, the additional 747 job losses in a basic industry is certain to aggravate what is already a serious situation. Because there are already 3,500 unemployed persons in the state employment area in which the Great Falls Area is located, the assumption was made in the study that none of the workers found new jobs and all collected their unemployment entitlements. While this will undoubtedly not be the case, it is not the most severe situation that could develop because in the case of each unemployed worker there was a loss of income offset by a compensating payment. Those workers who do find new employment and remain within the area will cause the figures that have been

presented for the loss of personal disposable income to appear as a high estimate. This effect will probably be more than offset by workers who leave the area in search of better job opportunities, and whose leaving will cause a loss of their entire purchasing power to the Great Falls Area economy. This loss of personal consumption expenditure will cause the data that have been presented for the loss of personal disposable income to appear as a low estimate. Because there is so great an uncertainty as to how many of those persons leaving the employment of The Anaconda Company will find new jobs or leave the area in search of new jobs during the remainder of calendar 1972, the study did not estimate a figure for either provision and thus attempted to avoid weighting the findings in either direction.

While the loss of gainful employment and the accompanying loss of income is a severe blow to the individuals no longer employed by The Anaconda Company, the lack of an opportunity to find suitable new employment within a reasonable period of time is perhaps of even greater consequence in the long run. Workers who find themselves unemployed due to no fault of their own will generally make the required adjustments if the losses are rectified through compensating economic opportunities. Where no such opportunities are made available to them, the workers must either leave the area to seek new employment opportunities or else they will remain in the area and accept a lower standard of living until suitable

employment has been obtained. The out-migration of workers and the existence of a hard core of unemployed workers are both examples of unfavorable economic impact upon a community.

The findings of this study do not indicate that economic chaos will set into the Great Falls Area economy as a result of the closing of the local zinc plant by The Anaconda Company. However, there can be no question that the reduction in employment in a basic industry, especially of the relative quantity that is involved in this study, will have a significant impact upon the local area. The impact will be all the worse because it will be upon an economy which already is experiencing an unfavorable employment trend.

Recommendations for Further Research

It is at best difficult to predict economic impact because of the constantly changing economic environment. While this report was being prepared there were other developments within the local area which may have future effects upon the economy that may either increase or lessen that impact which can be reasonably expected from the closing of the local zinc operations. For example, the building of the Safeguard Antiballistic Missile complex north of the Great Falls Area and such events as the announced departure of the military personnel in the 319th Fighter Interceptor Squadron located at Malmstrom Air Force Base and the planned expansion of the Great Falls Airport

facilities are sure to have an impact upon the Great Falls Area economy.

It would be both interesting and useful for someone to evaluate the eventual impact that the closing of the local zinc operations did have upon the economy of the Great Falls Area. Among other benefits, this study could provide some insight as to whether the basic-service ratio and the regional multiplier computed in this study did predict, with some reasonable accuracy, unemployment in the secondary or service sector.

If such a study is undertaken, the person doing the research should be cautioned to remain aware of the general economic conditions which prevailed in the Great Falls Area at the time of this study. Had general economic conditions been different, there can be no doubt that different outcomes would have been predicted.

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